

## **Translation and Adaptation of Coping Strategies Short Form in Pakistan**

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The objective of the current study is to translate and adapt Coping Strategies Inventory-Short Form (CSI-SF; Tobin, 1995) into Urdu language and also to determine the psychometric properties of this measure. After translation the Urdu Version of the scale was administered on the sample of 100 adults, with age ranges between 25-60 years ( $M = 37.68$ ) were approached from different government and private institutes situated in Karachi, Pakistan. The reliability of the CSI-SF was assessed through the analysis of Cronbach alpha and Split-half reliability. The measures of the study included Coping Strategies Inventory-Short Form (Tobin, 1995) English Urdu version of CSI-SE and Siddiqui Shah Depression Scale (SSDS; Siddiqui & Shah, 1997). Results found significant correlation between English and Urdu version of the CSI-SF Scale ( $r = .80, p < .01$ ) along with the item total correlation ranging from  $r = .31$  to  $r = .61$  and item-item correlations ranging from  $r = .38$  to  $r = .81$  inferring the CSI-SF Urdu version to have a good linguistic equivalence. The reliability assessments indicate good internal consistency ( $\alpha = .78$ ) and Guttman Split-Half Coefficient ( $r = .82, p < .01$ ). Results show significant relationship of problem focused coping and depression ( $r = -.491$ ) and between avoidant focused coping and depression ( $r = .388$ ). Urdu version of CSI-SF found to be a reliable and a valid measure of coping strategies for Pakistani population.

*Keywords:* Urdu Version of Coping Strategies Inventory-Short Form, problem focused, avoidant focused depression, psychometric properties.

According to Iqbal and Kokash (2011), when an individual faces difficulty to handle a stressful situation, it affects the equilibrium of body and mind, at this stage adequate coping mechanisms can help the individual to manage the stressful situations. According to Folkman and Lazarus (1988), coping strategies are the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them. The most important component of coping is appraisal of the stressful situation which focuses on the demands of the situation and the resources to handle the situation (Lazarus & Folkman, 1984).

The construct of coping has been into research since decades. It has been extensively worked by many other researchers. Lazarus and Folkman (1984) categorized coping into problem focused and emotional focused strategies. Coping strategies in general and problem focused coping strategies in particular are hallmark of an individual to face a stressful situation. Strong research findings are showing association between coping strategies and reduction in stress and depression. Problem focused coping has negatively been associated with depression (Mosher & Prelow, 2007). It can be considered as a protective factor for an individual in a stressful situation which results in emotional stability (Maulik, et al., 2011). It is also one of the preventive factors of depression (Thoits, 2011). Whereas, avoidant focused coping is positively correlated with depression (Mosher & Prelow, 2007). Similarly, wishful thinking involves efforts to suppress the thoughts and emotions related to stressful situation (Renk & Smith, 2007; Tobin

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et al., 1989). It is positively related to dysregulation of emotions and stress tolerance (Renk & Smith, 2007). Wishful thinking not only increases depressive symptomatology but is a predictive factor of depression (Dyson & Renk, 2006). Individuals coping strategies also has significant contribution in well-being. Those who are unable to cope up with the difficult life circumstances are unable to regulate their emotions, as a result they use maladaptive coping strategies like, substance use (Ali & Shahzad, 2019).

In the area of coping, following the work of Lazarus and Folkman (1988), further enhancements have been made by several other researchers. Coping Strategies Inventory is one of such contributions by Tobin. This inventory is a valid and reliable measure of coping strategies, which covers affective and cognitive aspects. Tobin and colleagues (1989) proposed a hierarchical model of coping based on factor analysis consisting on eight well identified and research based coping strategies that entail approaches which include problem-solving and avoidance that has further categories of problem avoidance and wishful thinking strategies, cognitive approach includes cognitive restructuring, affective approach further divided in expressing emotions and self-criticism strategies and social support seeking or withdrawal.

Cross cultural assessment has become a sensitive issue due to specific concerns regarding the use of standardized tests across cultures (Butcher & Garcia, 1978). Many of the tests and scales used in psychological research in Pakistan have been developed in Western settings. Administration of the measures with different languages and varied cultural backgrounds are always challenging and question the validity, authenticity and generalizability of the research in primarily non-English speaking countries like Pakistan. Cultural difference has constrained the questionnaires and scales for cross cultural use, as Minggang & Yuan (2004) specified that environment shapes the person's viewpoints regarding various indispensable facets of life, such as norms, values and ideas. Keeping in view the above mentioned evidences, there is a strong need for valid and reliable instruments that measure the domain of coping strategies in Pakistani population in native language (i.e., Urdu) and in the cultural context. So, present study aims to translate and adapt SFI-SF and to investigate the psychometric properties of Urdu version of SFI-SF by using Siddiqui Shah Depression Scale. The main purpose to use this instrument for the validation of SFI-SF is that Siddiqui Shah Depression Scale is an indigenous scale for depression developed according to the norms and culture of Pakistan, so that is considered to be one of more suitable measure to be used for discriminant validity of any coping strategies scale.

## **Method**

The process of translation and adaptation of Coping Strategies Inventory-Short Form was carried out in the following steps.

### **Formulation of the Expert Panel**

Johansone and Malak (2007), and Beaton, et al, (2007) suggested that the experts in the panel or the committee need to be highly qualified in the field which is intended to measure by the instrument and they required to have technical and scientific knowledge related to the paradigm and concept for which the tool is validated. A panel of 6 experts including the

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researchers with a good proficiency in English as well in Urdu language and two Assistant Professors (PhD degree) and two Clinical Psychologists with MPhil were selected as a part of expert panel to evaluate and examine the translations and to check the cultural sensitivity of the content in the adapted versions.

### **Forward Translation**

One of the basic steps in test adaptation is the process of Translation in which a single translator, or preferably, a group of translators translate the test items from the original language to the target language (Hambleton, 2005). To achieve this goal the English version of CSI- SF was given to two experts with PhD degree with fluency in both Urdu and English language and a linguist expert translated this scale to Urdu language. The committee then conducted meetings to examine and review the translations. Forward translations were reviewed by committee members and revisions in the items were made according to the suggestions and comments of the members. Then a draft was prepared for the back-translation.

### **Committee and Expert Panel**

In the current study, Committee Approach was implemented in order to choose the best translated items and to alter the items in accordance with the cultural context. A panel of 6 experts including the researchers, two Assistant Professors with PhD in Clinical Psychology and two Clinical Psychologists with MPhil in Clinical Psychology have evaluated and examined the translations and selected the best translated items. These translated items were analyzed on the basis of syntax, vocabulary, sensitivity and cultural relevance. Modifications suggested by the panel were incorporated in the selected translations and the translation considered as closest to the English original items was then selected for further process of backward translation.

### **Back Translation**

According to Hambleton (2005) backward Translation needs to carry out after adapting a test from an original language to the target language, various translators translate back it to the original language. Stansfield (2003) discussed that translation in two languages is best to evaluate and compare the disparities and to detect the complications in initial forward translation. For the back translation of CSI-Short Form, a PhD psychologist, a psychiatrist and a linguistic expert with proficiency both in English and Urdu language as well as having knowledge of Pakistani culture were approached. The experts were unfamiliar with the original version of Coping Strategies Inventory- Short Form. These experts were provided with the final Urdu translation recommended by the committee to translate these items back to English.

The back-translated items were compared with the English, and decisions were made about their similarity and further revisions were made where necessary. Some of the items after back translations were not related to the original concepts therefore, those were modified and rephrased by the panel experts. Then the scale was finally reviewed by the panel of experts for the translation inaccuracies and a final draft was prepared for a linguistic study with consensus.

### **Linguistic equivalence/ cross language validation**

The Linguistic equivalence focuses on the translation precision and accuracy (Trimble, 2007). Thus, it measures the resemblance of the meanings of words in the original and the new test in accordance with the cultural contexts.

For assessing the linguistic equivalence of two different language versions of a test is to administer both versions of the test to the bilingual group of test takers, who are efficient and fluent in both languages. The reason behind this method is to eliminate the *language group* effect on the same group of respondents. So that variations detected in test or item performance across languages can be attributed to the linguistic differences between the tests or item (Sireci & Berberolu, 2000).

To carry out the procedure of linguistic equivalence a sample of 100 adults, with age range of 25-60, from private and government institutes and organizations was recruited. The original English version of Coping Strategies Inventory-Short form was given followed by the translated version of scale with the interval of 4 days. Some of the protocols of English version were rejected due to absence/withdrawal of the respondents or because of the incomplete responses. Both versions of the test were scored according to the standard procedures given by the respective author.

## **Measures**

Following measures were used in the study:

### ***Personal Information Form***

Demographic information of the sample was comprised of personal information, family and occupation related information. Personal information included items related to participant's gender, age, health related items like history of any chronic illness (physical or psychological) and birth order. Family related information mainly focused on marital status, years of marriage, number of children, and family structure. Occupational information included name of organization, duration of job and income.

### ***Coping Strategies Inventory-Short Form (CSI-SF; Tobin, 1995)***

Coping Strategies Inventory developed by Tobin and colleagues in 1989 is consisted on 32 items. These 32 items are further divided into three subscales including firstly Primary subscale that has the items of problem solving (1, 9, 17, 25), cognitive restructuring (2, 10, 18, 26), express emotions (3, 11, 19, 27), social contact (4, 12, 20, 28), problem avoidance (5, 13, 21, 29), wishful thinking (6, 14, 22, 30), self-criticism (7, 15, 23, 31) and social withdrawal (8, 16, 24, 32). The primary items show a Cronbach alpha reliability of .70. Secondary subscale with Cronbach alpha reliability of .82 included subcategories of problem focused engagement, emotion focused engagement, problem focused disengagement and emotion focused disengagement. Third, categories of Tertiary subscale entailed engagement and disengagement with an alpha reliability of .90. To calculate the Secondary and Tertiary subscale scores, the Primary subscale scores are added that makes up that subscale. The subjects were required to choose "most preferred" for all 32 items that they feel close to themselves at present moment. Each item was scored on 5 likert scale.

### ***Siddiqui Shah Depression Scale (SSDS; Siddiqui & Shah, 1997)***

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SSDS is a 36 item self-report measure to assess depression both in clinical as well as non-clinical population. It is 4-point scale with sound psychometric properties showing a split half reliability of 0.80 and 0.89 for non-clinical population and .91 and .89 correlation for clinical and non-clinical sample, respectively. It is highly correlated with Zung's Depression scale ( $r= 0.55$ ;  $p>0.01$ ). It has median cutoff scores; scores above median indicate severe depression and below median are considered to be mildly depressed (Siddiqui & Shah, 1997).

### Participants and Procedure

To carry out translation, adaptation and to assess reliabilities and validity of CSI-SF following procedures were followed. For the process of linguist equivalence a sample of 100 adults, with age ranges between 25-60 years ( $M= 37.68$ ) was selected from different government and private Institutes situated in Karachi with the consent of the authorities of selected schools.

Sample was further divided into two groups i.e., male (50%) and females (50%). Their minimum education was from intermediate level and maximum education was masters. Permission to conduct research was acquired from Advanced Studies and Research Board, University of Karachi and the ethical approval for the use of data for research purpose was also taken from the participants through informed consent form. The participants were selected on the basis of the following inclusion and exclusion criteria and their respective details are given below in table 1.

- Adults with the age of 25 to 60 years were included.
- All the participants with education of minimum intermediate and maximum of masters were included in the study sample.
- Participants having any diagnosis of mental or physical disorder were excluded.
- Individual with any neurological or physical disability were excluded.
- Unwilling participants were excluded.
- Separated, divorced and widowed individuals were not selected being part of the sample.

**Table 1**  
*Frequency and Percentages of Demographic Variables (N=100)*

Variables	<i>f</i>	%
Gender		
Males	50	50%
Females	50	50%
Socioeconomic Status		
Lower	17	17%
Middle	33	33%
Upper	50	50%
Family system		
Nuclear	56	56%
Joint	44	44%

The above mentioned table shows the demographic characteristics of the participants.

### Results

The standard method for scoring was used for all the measures used in this study. Descriptive statistics was used to analyze distribution sample characteristics, Pearson correlation coefficients were used to measure the linguistic equivalence of CSI-SF, discriminant validity and alpha coefficient and Guttman's reliability assessments were computed to study the internal consistency and split half reliability respectively through Statistical Package for Social Sciences (SPSS; V-21).

### Reliability and Validity Assessment of CSI- SF Urdu Version

The most prevailing means of reliability are Kuder-Richardson and coefficient Alpha termed as Cronbach's alpha. It gives response consistency of all the items by single administration. Following two sources influenced on inter-item consistency i.e. content sampling and heterogeneity of sample domain. High heterogeneity in behavior of sample has positive relationship with inter-item consistency (Rodriguez & Maeda, 2006). For internal consistency of the CSI-short form, the correlation coefficient of the scores on 32 items was calculated with the total and scores of scale.

Split half reliability or a parallel form reliability measures consistency among scale items. It can be calculated by several split half procedures from a single administration. A test is split into two equal halves to obtain reliability. Even and odd half of the test is considered as a better split half to eliminate or reduce the impact of the factors like fatigue, effects of practice, boredom till the end of the test as well as difference in nature and difficulty level of items (Anastasi, 1997). The Urdu version of CSI-SF was divided into two halves i.e., (a) consisted of U1, U3, U5, U6, U7, U9, U11, U13, U15, U17, U21, U23, U25, U27, U29, U31 and items (b) consisted of remaining Items of the scale U2, U4, U6, U8, U10, U12, U14, U16, U18, U20, U22, U24, U26, U28, U30, U32

For the discriminant validity of the Scale Siddiqui Shah Depression scale (Siddiqui & Shah, 1997) was used. Which is a 36 items rating scale used both for clinical as well as non-clinical population with reliabilities of .80 and .89 and .91 and .89 respectively. Overall score above median is considered as severe depression and below median is mild depression. The results are shown below in the tables.

**Table 2**  
*Descriptive statistics for the measures of CSI-SF (N=100)*

Measures	Min	Max	M	SD
CSI-SF	26	109	67.56	16.49
Problem solving	1	16	9.97	3.55
Cognitive Restructuring	2	16	10.27	3.25
Expressed Emotions	1	16	9.08	3.96
Social Contact	0	16	9.51	4.72
Problem Avoidance	0	15	6.33	3.63
Wishful Thinking	0	16	9.20	4.52
Self-Criticism	0	16	6.16	4.52
Social Avoidance	0	16	7.08	4.28

The above mentioned table shows the descriptive statistics of the variables of the study

**Table 3**

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*Linguistic Equivalence (Correlation between English version and Urdu version) of CSI-SF (N=100)*

Test administered	Mean	<i>r</i>	<i>p</i>
Original Version	70.54		
Urdu version	67.5	.807	0.01

Pearson Product Moment Correlation between original version (English) and translated Version (Urdu) of CSI-S shows a significant strong correlation between both versions.

**Table 4**

*Item total correlation of CSI-SF Urdu Version (N=100)*

Item No.	<i>r</i>	<i>p</i>
1	.11	0.25
2	.37	0.01
3	.40	0.01
4	.58	0.01
5	.36	0.01
6	.42	0.01
7	.34	0.01
8	.24	0.05
9	.13	0.18
10	.34	0.01
11	.39	0.01
12	.37	0.01
13	.42	0.01
14	.34	0.01
15	.37	0.01
16	.47	0.01
17	.27	0.01
18	.29	0.01
19	.48	0.01
20	.44	0.01
21	.26	0.01
22	.38	0.01
23	.37	0.01
24	.46	0.01
25	.31	0.01
26	.22	0.05
27	.31	0.01
28	.43	0.01
29	.15	0.12
30	.61	0.01
31	.47	0.01
32	.44	0.01

Pearson Correlation coefficient (*r*) for every item shows significant correlation between total test scores and every item of the translated version at the confidence interval of 0.01 and

0.05 except for the items 1, 9, and 29.

**Table 5**

*Linguistic equivalence (item by item) of Urdu & English version of CSI-SF (N=100)*

Item No.	<i>r</i>	<i>p</i>
1	.68	0.01
2	.68	0.01
3	.67	0.01
4	.82	0.01
5	.52	0.01
6	.78	0.01
7	.66	0.01
8	.72	0.01
9	.68	0.01
10	.64	0.01
11	.62	0.01
12	.68	0.01
13	.74	0.01
14	.57	0.01
15	.69	0.01
16	.46	0.01
17	.47	0.01
18	.49	0.01
19	.57	0.01
20	.71	0.01
21	.38	0.01
22	.62	0.01
23	.61	0.01
24	.61	0.01
25	.45	0.01
26	.48	0.01
27	.36	0.01
28	.55	0.01
29	.61	0.01
30	.52	0.01
31	.67	0.01
32	.52	0.01

Pearson Correlation Coefficient (*r*) for every item shows significant correlation between every item of the translated version and original version at the confidence interval of 0.01 and 0.05.

**Table 6**

*Internal Consistency of Coping Strategies Inventory-Short Form Urdu version*



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Urdu Items of CSI-SF	$\alpha$
32	.78

The above mentioned table shows that the scale has good internal consistency based on the values of Cronbach Alpha.

**Table 7**  
*Split Half Reliability of CSI-SF*

<i>Split Half Reliability</i>		
Cronbach's Alpha	Part A	.54
	Part B	.70
Correlation between Forms		.72
Spearman-Brown Coefficient		.83
Guttman Split-Half Coefficient		.82

*Note.* Part A: U1, U3, U5, U7, U9, U11, U13, U15, U17, U19, U21, U23, U25, U27, U29, U31  
Part B: U2, U4, U6, U8, U10, U12, U14, U16, U18, U20, U22, U24, U26, U28, U30, U32

The above mentioned table indicates that there is a strong correlation between forms which shows good internal consistency of the scale.

**Table 8**  
*Relationship of Problem Focused Coping & Avoidant Focused Coping Strategies with Depression (N=100)*

Scale	$r$	$p$
Problem-focused coping & Depression	-.49	0.01
Avoidant-Focused coping & depression	.38	0.01

## Discussion

Coping Strategies Inventory is important for clinical as well as research purposes and it has been highly researched globally. It has also been noted that reliability of the translated and adapted version of scales are an integral component of any measure to be used for research purposes (e.g., Anastasi & Urbani, 1997; Bashir, et al., 2008; Golafshani 2003; Hambleton, 2005).

Findings of the current study shows correlation of original English version and adapted Urdu version of Coping Strategies Inventory-Short form ( $r=.807$ ,  $p<.01$ ), total to item correlations of the Urdu version ranges from ( $r=.31-.57$ ,  $p<.01$ ), and an item by item correlation of ( $r=.38-.81$ ,  $p<.01$ ). These Pearson correlation coefficients are indicating CSI-SF to possess a good linguistic equivalence. However, three items (item 1: I worked on solving the problem the situations, item 9: I made a plan of action and followed it, and item 29: I avoided thinking or doing anything about the situation) showed non-significant coefficient of correlation with the

total score of Urdu version. Item 1 and item 9 are related to problem solving while item 29 is measuring problem avoidance. possible explanation for the three items to be insignificant could be due to syntax of items being in Urdu, which highly indicates personal attributes to a problem situation. Therefore,, respondents scored high on the first two items and low on item 19 portraying an avoidance of a problem situation. In the present study the Urdu version of CSI-SF shows a significant Cronbach's Alpha of .89 ( $p < 0.01$ ) which indicates a high internal consistency among items.

Similarly, Guttman Split half score of .829 ( $p < 0.01$ ) designates CSI-SF to be a reliable tool to measure coping strategies. Moreover, findings show significant relationship of both problem focused and avoidant focused coping strategies with depression. It is possible that people with depression in stressful situation perceive events negatively and instead of seeking problem focused strategies they usually remain passive and escape problems. In such circumstances they usually ruminate past and avoid social contacts. Similar findings by Holahan and Moos (1991) revealed that people with depression are to be more passive. They usually deal with wishful thoughts and avoid people with high self-criticism. Due to this avoidance, they are unable to take feedback that could help them in altering the way of thinking and functioning, which leads to more stress and subsequent depression and anxiety. The significant negative relationship of problem focused coping and the significant positive relationship of emotional focused coping with depression is indicative of a strong validity of the adapted version CSI-SF, making this tool as a sound instrument to use in Pakistan.

### **Limitations and suggestions for future research**

This study has number of strengths and also has few limitations like other studies. In the present study, equal number of different socioeconomic classes have not been taken therefore socioeconomic differences in future can also be find out. Sample size can also be increased to make research work more generalized and reliable. Exploring different types of stressors specifically those encountered by adults in Pakistan and how they apply coping strategies to deal with them, will give interesting results. Self-report measures were used in present study to assess coping styles and depression, other ways can also be utilized to assess them like observation, family interview, projective tests etc. Other suggestion for future research is to find the comorbidity of maladaptive coping strategies with other psychological problems than depression.

### **Conclusion**

Coping strategies are different ways to deal with stressful situation and significant to psychological health of every individual. Moreover, adaptive coping styles results in healthy mental health whereas, maladaptive coping results during depression and other mental health problems. There are many scales available in English to assess different type of coping strategies including Coping Strategies Inventory-Short Form. However, still its accurate assessment in our culture is difficult due to the cultural and language barriers. Therefore, in the light of previous literature and main cultural concerns one of the major implications of this study is the availability (translation & adaptation) of a valuable measure in local (Urdu) language in Pakistan, which can be conveniently used to assess coping in stressful situations. In addition,

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results based on culturally valid tools can be used for different major goals like awareness programs, policy making and in educational setups.

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